



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,441	03/01/2004	Alan Flum	488-191	9790
29540	7590	12/31/2007	[REDACTED]	[REDACTED]
DAY PITNEY LLP			EXAMINER	
7 TIMES SQUARE			YAM, STEPHEN K	
NEW YORK, NY 10036-7311			[REDACTED]	[REDACTED]
			ART UNIT	PAPER NUMBER
			2878	
			[REDACTED]	[REDACTED]
			MAIL DATE	DELIVERY MODE
			12/31/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

TH

Office Action Summary	Application No.	Applicant(s)	
	10/790,441	FLUM ET AL.	
	Examiner	Art Unit	
	Stephen Yam	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-16 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 5) Claim(s) ____ is/are allowed.
 6) Claim(s) 1-16 is/are rejected.
 7) Claim(s) ____ is/are objected to.
 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 01 March 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.
 | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5-8, 10-13, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Aoki US 2002/0021450.

Regarding Claim 1, Aoki teaches (see Fig. 9, 14, 16) a controller comprising: a rotatable (see Paragraph 0076) platter (50) journaled for rotation (see Paragraph 0076), said rotatable platter having at least one degree of freedom of movement in addition to rotation (see Fig. 14 and Paragraph 0065); an optical system (2), responsive to said rotatable platter; and said optical system including an output (combined outputs of (58), (56)) responsive to said rotatable platter (see Paragraph 0060, 0064).

Regarding Claim 2, Aoki teaches said rotatable platter includes a textured pattern (51) whereby said optical system acquires sequential surface images (using (56)) of said textured pattern.

Regarding Claim 3, Aoki teaches said optical system is responsive to rotational movement of said rotatable platter (see Paragraph 0076).

Regarding Claim 5, Aoki teaches said optical system is responsive to rotational position of said rotatable platter (“displacement”- see Paragraph 0056).

Regarding Claim 6, Aoki teaches said at least one degree of freedom of movement comprises one degree of freedom of movement (see Fig. 14).

Regarding Claim 7, Aoki teaches said one degree of freedom comprises tilting of said rotatable platter (see Paragraph 0065, 0067, 0068).

Regarding Claim 8, Aoki teaches said optical system is responsive to tilting movement of said rotatable platter (see Paragraph 0065, 0067, 0068).

Regarding Claim 10, Aoki teaches said optical system is responsive to tilting position of said rotatable platter (see Paragraph 0065, 0067, 0068).

Regarding Claim 11, Aoki teaches said at least one degree of freedom of movement comprises two degrees of freedom of movement (see Fig. 16 and Paragraph 0067).

Regarding Claim 12, Aoki teaches said two degrees of freedom comprise tilting of said rotatable platter in directions orthogonal to each other (see Fig. 16 and Paragraph 0067).

Regarding Claim 13, Aoki teaches said optical system is responsive to tilting movement of said rotatable platter (see Paragraph 0065, 0067, 0068).

Regarding Claim 15, Aoki teaches said optical system is responsive to tilting position of said rotatable platter (see Paragraph 0065, 0067, 0068).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 9, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki.

Regarding Claims 4, 9, and 14, Aoki teaches the device in Claims 2, 7, and 12, according to the appropriate paragraph above. Aoki does not teach the optical system responsive to rotational velocity or tilting velocity. It is well known in the art to provide calculations for displacement velocity in a displacement detection system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the optical system responsive to rotational velocity and/or tilting velocity, in the device of Aoki, to provide velocity detection for additional utility when speed detection is desired.

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki in view of Nahum et al. US Patent No. 6,642,506.

Regarding Claim 16, Aoki teaches the device in Claim 1, according to the appropriate paragraph above. Aoki does not teach said rotatable platter includes a circumferential skirt with a textured pattern whereby said optical system acquires sequential surface images of said textured pattern. Nahum et al. teach (see Fig. 5) a similar device with a rotatable platter (420) including a circumferential skirt (422) with a textured pattern (see Col. 7, lines 42-49) whereby said optical system acquires sequential surface images of said textured pattern (see Col. 2, lines 33-35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide said rotatable platter including a circumferential skirt with a textured pattern whereby said optical system acquires sequential surface images of said textured pattern,

as taught by Nahum et al. in the device of Aoki, to provide usage of the device in a shaft-rotation displacement-sensing system.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kabuko et al. US 7,019,280 and Lingert et al. US 3,657,551 teach similar devices with detecting tilt.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Yam whose telephone number is (571)272-2449. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571)272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SY

SY